Coke Production 2011

	Coke Produced					
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)
January	299,687	**62,657**	**0**	**78,197**	**84,152**	**74,681**
February	269,879	**55,703**	**0**	**71,261**	**75,740**	**67,175**
March	290,957	**60,994**	**0**	**74,449**	**84,109**	**71,405**
Subtotal	860,523	179,354	0	223,907	244,001	213,261
% of Total	25.3	25.7	0.0	25.5	24.6	25.5
April	279,849	**57,358**	**0**	**72,111**	**81,585**	**68,795**
May	283,800	**55,873**	**0**	**72,711**	**83,724**	**71,492**
June	276,021	**54,644**	**0**	**70,702**	**83,131**	**67,544**
Subtotal	839,670	167,875	0	215,524	248,440	207,831
% of Total	24.7	24.1	0.0	24.5	25.1	24.8
July	286,815	**58,649**	**0**	**73,046**	**84,838**	**70,282**
August	288,266	**57,609**	**0**	**74,348**	**87,055**	**69,254**
September	274,084	**56,852**	**0**	**70,282**	**80,543**	**66,407**
Subtotal	849,165	173,110	0	217,676	252,436	205,943
% of Total	24.9	24.8	0.0	24.8	25.5	24.6
October	285,661	**57,796**	**0**	**74,785**	**82,197**	**70,883**
November	280,888	**58,217**	**0**	**72,071**	**81,270**	**69,330**
December	287,773	**60,659**	**0**	**74,919**	**82,242**	**69,953**
Subtotal	854,322	176,672	0	221,775	245,709	210,166
% of Total	25.1	25.3	0.0	25.2	24.8	25.1
Total	3,403,680	697,011	0	878,882	990,586	837,201
Average	283,640	58,084	0	73,240	82,549	69767

Coke Production 2012

	Coke Produced						
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)	**Battery C** (Tons)
January	287,695	**58,757**	**0**	**72,245**	**89,049**	**67,644**	**0**
February	269,734	**52,324**	**0**	**70,518**	**79,046**	**67,846**	**0**
March	283,209	**57,409**	**0**	**71,395**	**85,947**	**68,458**	**0**
Subtotal	840,638	168,490	0	214,158	254,042	203,948	0
% of Total	24.8	25.0	0.0	25.9	25.3	24.8	0.0
April	275,033	**56,206**	**0**	**68,753**	**83,105**	**66,969**	**0**
May	283,442	**57,724**	**0**	**71,351**	**85,597**	**68,770**	**0**
June	276,568	**56,060**	**0**	**68,108**	**82,183**	**70,217**	**0**
Subtotal	835,043	169,990	0	208,212	250,885	205,956	0
% of Total	24.6	25.3	0.0	25.2	25.0	25.1	0.0
July	277,134	**56,083**	**0**	**66,980**	**85,591**	**68,480**	**0**
August	277,148	**54,881**	**0**	**67,796**	**85,084**	**69,387**	**0**
September	266,847	**53,720**	**0**	**65,352**	**79,312**	**68,463**	**0**
Subtotal	821,129	164,684	0	200,128	249,987	206,330	0
% of Total	24.2	24.5	0.0	24.2	24.9	25.1	0.0
October	274,914	**54,543**	**0**	**69,826**	**83,258**	**67,287**	**0**
November	279,586	**54,678**	**0**	**67,580**	**81,514**	**66,931**	**8,883.48**
December	340,670	**60,408**	**0**	**67,687**	**82,875**	**71,373**	**58,327.48**
Subtotal	895,170	169,629	0	205,093	247,647	205,590	67,211
% of Total	26.4	25.2	0.0	24.8	24.7	25.0	100.0
Total	3,391,980	672,793	0	827,591	1,002,561	821,824	67,211
Average	282,665	56,066	0	68,966	83,547	68485	5601

Coke Production 2013

	Coke Produced						
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)	**Battery C** (Tons)
January	348,629	**59,288**	**0**	**68,957**	**83,191**	**71,371**	**65,821**
February	323,323	**53,165**	**0**	**62,658**	**77,247**	**66,201**	**64,052**
March	361,426	**59,541**	**0**	**67,131**	**86,638**	**72,343**	**75,773**
Subtotal	1,033,378	171,994	0	198,746	247,077	209,915	205,647
% of Total	24.4	25.4	0.0	24.5	24.7	24.6	22.9
April	355,869	**56,241**	**0**	**66,306**	**83,342**	**71,823**	**78,157**
May	365,682	**59,824**	**0**	**69,505**	**82,747**	**72,149**	**81,457**
June	347,335	**55,563**	**0**	**64,998**	**80,949**	**70,649**	**75,176**
Subtotal	1,068,886	171,628	0	200,809	247,038	214,620	234,791
% of Total	25.2	25.3	0.0	24.7	24.7	25.1	26.2
July	356,586	**55,140**	**0**	**67,628**	**82,665**	**71,895**	**79,258**
August	361,051	**55,290**	**0**	**69,056**	**86,598**	**72,999**	**77,108**
September	353,179	**53,226**	**0**	**69,782**	**81,583**	**71,599**	**76,989**
Subtotal	1,070,816	163,656	0	206,466	250,846	216,494	233,354
% of Total	25.2	24.1	0.0	25.4	25.1	25.3	26.0
October	358,311	**57,123**	**0**	**71,337**	**86,044**	**71,777**	**72,030**
November	353,808	**56,031**	**0**	**66,553**	**85,866**	**70,716**	**74,642**
December	355,893	**57,704**	**0**	**68,363**	**83,137**	**70,771**	**75,918**
Subtotal	1,068,012	170,858	0	206,253	255,047	213,264	222,590
% of Total	25.2	25.2	0.0	25.4	25.5	25.0	24.8
Total	4,241,092	678,136	0	812,274	1,000,008	854,294	896,381
Average	353,424	56,511	0	67,689	83,334	71191	74698

Coke Produced 2014

	Coke Produced						
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)	**Battery C** (Tons)
January	350,457	**60,137**	**0**	**65,403**	**82,180**	**69,211**	**73,526**
February	305,101	**54,163**	**0**	**56,784**	**72,755**	**57,721**	**63,678**
March	368,559	**59,102**	**0**	**72,372**	**86,219**	**72,801**	**78,065**
Subtotal	1,024,117	173,402	0	194,559	241,154	199,733	215,269
% of Total	24.6	26.0	0.0	24.0	25.1	24.4	23.8
April	347,382	**53,637**	**0**	**66,083**	**84,070**	**68,390**	**75,202**
May	310,255	**53,690**	**0**	**64,674**	**68,284**	**59,008**	**64,599**
June	328,796	**51,933**	**0**	**68,129**	**67,046**	**66,184**	**75,504**
Subtotal	986,433	159,260	0	198,886	219,400	193,581	215,306
% of Total	23.7	23.9	0.0	24.5	22.8	23.6	23.8
July	349,052	**54,145**	**0**	**71,260**	**77,552**	**68,746**	**77,349**
August	363,391	**54,404**	**0**	**68,762**	**85,465**	**72,613**	**82,146**
September	348,120	**54,597**	**0**	**65,915**	**81,976**	**69,044**	**76,589**
Subtotal	1,060,563	163,146	0	205,937	244,993	210,403	236,083
% of Total	25.5	24.5	0.0	25.4	25.5	25.7	26.1
October	364,279	**56,234**	**0**	**68,922**	**85,081**	**73,893**	**80,149**
November	352,162	**54,940**	**0**	**69,671**	**84,647**	**67,289**	**75,615**
December	374,201	**59,265**	**0**	**73,772**	**85,786**	**74,133**	**81,246**
Subtotal	1,090,642	170,439	0	212,365	255,514	215,316	237,009
% of Total	26.2	25.6	0.0	26.2	26.6	26.3	26.2
Total	4,161,755	666,247	0	811,747	961,061	819,033	903,668
Average	346,813	55,521	0	67,646	80,088	68253	75306

Coke Production 2015

	Coke Produced						
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)	**Battery C** (Tons)
January	362,470	**56,007**	**0**	**71,220**	**84,045**	**70,086**	**81,112**
February	280,324	**47,315**	**0**	**56,253**	**64,464**	**48,263**	**64,029**
March	320,314	**51,729**	**0**	**61,640**	**75,123**	**55,796**	**76,026**
Subtotal	963,108	155,051	0	189,113	223,632	174,146	221,166
% of Total	25.5	23.8	0.0	27.9	26.4	24.2	25.1
April	320,221	**52,170**	**0**	**59,781**	**75,645**	**55,995**	**76,630**
May	337,800	**56,474**	**0**	**61,813**	**77,765**	**62,932**	**78,816**
June	325,912	**52,691**	**0**	**56,857**	**77,030**	**64,082**	**75,252**
Subtotal	983,933	161,335	0	178,451	230,440	183,009	230,698
% of Total	26.1	24.8	0.0	26.4	27.2	25.5	26.2
July	350,442	**57,284**	**0**	**60,925**	**83,953**	**70,135**	**78,145**
August	353,559	**58,406**	**0**	**60,868**	**83,655**	**71,860**	**78,770**
September	307,393	**54,579**	**0**	**54,824**	**69,879**	**55,547**	**72,564**
Subtotal	1,011,394	170,269	0	176,617	237,487	197,541	229,480
% of Total	26.8	26.1	0.0	26.1	28.0	27.5	26.1
October	299,835	**55,601**	**0**	**54,027**	**65,309**	**52,215**	**72,683**
November	264,824	**53,632**	**0**	**40,114**	**45,657**	**55,708**	**69,713**
December	253,151	**55,785**	**0**	**38,851**	**46,088**	**55,596**	**56,831**
Subtotal	817,810	165,018	0	132,992	157,054	163,520	199,226
% of Total	21.7	25.3	0.0	19.6	18.5	22.8	22.6
Total	3,776,245	651,673	0	677,173	848,613	718,216	880,570
Average	314,687	54,306	0	56,431	70,718	59851	73381

Coke Production 2016

	Coke Produced						
	Total (Tons)	**Batt. 1-3** (Tons)	**Batt. 7-9** (Tons)	**Batt. 13-15** (Tons)	**Batt. 19-20** (Tons)	**Battery B** (Tons)	**Battery C** (Tons)
January	249,831	**54,288**	**0**	**39,098**	**45,972**	**55,973**	**54,500**
February	233,429	**49,122**	**0**	**38,127**	**44,128**	**48,806**	**53,246**
March	253,392	**50,474**	**0**	**40,362**	**47,704**	**56,180**	**58,672**
Subtotal	736,652	153,884	0	117,587	137,804	160,959	166,418
% of Total	59.5	59.0	0.0	61.1	60.3	58.1	59.6
April	246,486	**53,044**	**0**	**37,142**	**44,664**	**54,137**	**57,499**
May	254,681	**53,965**	**0**	**37,679**	**45,909**	**61,873**	**55,255**
June	0		**0**				
Subtotal	501,167	107,009	0	74,821	90,573	116,010	112,754
% of Total	40.5	41.0	0.0	38.9	39.7	41.9	40.4
July	0		**0**				
August	0		**0**				
September	0		**0**				
Subtotal	0	0	0	0	0	0	0
% of Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0
October	0		**0**				
November	0		**0**				
December	0		**0**				
Subtotal	0	0	0	0	0	0	0
% of Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1,237,819	260,893	0	192,408	228,377	276,969	279,172
Average	103,152	52,179	0	38,482	45,675	55394	55834

hagedorn, james

From: hagedorn, james
Sent: Tuesday, June 14, 2016 10:21 AM
To: 'mdzurinko@uss.com'; 'Deluca, Dean'
Cc: 'Jonelle S Scheetz'
Subject: Inspection of Clairton Works

I plan to drive out on June 27 and be in your plant on the 28th and 29th with two new employees, namely, Natalia Vazquez and Erin Malone. I want to teach them about coke plants and do some battery inspections. I would like to have a discussion with you when we get there on Tuesday around 9 AM. Please have the following information available for review during the inspection: any plans required to be developed and submitted under any applicable Part 63 MACT regulation, any Part 61 Subpart L and FF (coke plant and benzene waste regulations) reports and plans required to be maintained, any maintenance occurring at the present time, list of bad ovens and what is being done, test reports for any testing done in the last 2 years, Battery Standard Operating Procedures, coke production for the last 5 years, examples of any self- monitoring reports being generated or even data sheets (not Method 303 as we get those on a regular basis), future plans for the plant, fenceline monitoring if applicable, quench tower work done. As you know, my phone number is 215-814-2161, Natalia can be reached at X2121 and Erin is at X2190. Thank you for your cooperation. I would like to show Natalia and Erin as much as I can but they are not in the medical monitoring system so they have not been issued respirators. I know they can't go on the batteries themselves but I believe they can still do door inspections, stack inspections and pushing inspections as they are both Method 9 certified. Let me know if I need to know something.

Document Summary for AUTH130916 (View Only)

Traveler

Traveler ID: 00005389 **Traveler Name:** JAMES HAGEDORN **Organization:** EPAR03AP

Document Information

Currency: U.S. Dollar **Type:** TEMPORARY DUTY

TA Num: TAA030JV **Document ID:** **Purpose:** 0-SITE VISIT

Document Details: site visit at Clairton Works

Location Purpose	Alert	Location	From	To	Per Diem Rates
0-SITE VISIT		CLAIRTON, PA	06/27/16	06/30/16	130.00 / 54.00 (10/01/15-12/31/49)

Reservations

View Reservation History **PNR Status:** BOOKED

Reservation Type	Vendor/Carrier	Last Date to Ticket	Cost	Lodging Location	Ticket #/Res. #	Date & Time	Emissions	Traveler
LODGE	Hampton Inns	N/A	375.30	Hampton Inn Pittsburgh/West Mifflin West Mifflin,PA	1002078406	06/27/2016 00:00	N/A	JAMES William HAGEDORN

Expenses

Total Per Diem Expenses: 564.30 **Total Non-Per Diem Expenses:** 74.95

Details	Alert	Date	Source	Expense Description	Expense Category	Cost	Payment Method	PerDiem
		05/23/2016		Estimated TDY Voucher Fee	Transaction Fees	14.75	GOVCC	
		05/23/2016		Estimated Travel Fee	Com. Carrier	7.66	GOVCC	
		Comments: OTRS Domestic-Intl w-o Air-Rail _Lodging and-or Car Only_						
		06/27/2016		Hotel Tax (CONUS Only)	Misc Expense	52.54	GOVCC	
	⚠	Default Payment Method for this expense is not being used. Please verify for accuracy.						
		06/27/2016		Lodging	Lodging & M&IE	125.10	GOVCC	Yes
	⚠	Default Payment Method for this expense is not being used. Please verify for accuracy.						
		Comments: Conf Num: 83242107 Cmt: 6PM CANCEL DAY OF ARRIVAL						
		06/27/2016		M&IE	Lodging & M&IE	40.50	PERSONAL	Yes
		06/28/2016		Lodging	Lodging & M&IE	125.10	GOVCC	Yes
	⚠	Default Payment Method for this expense is not being used. Please verify for accuracy.						
		Comments: Conf Num: 83242107 Cmt: 6PM CANCEL DAY OF ARRIVAL						
		06/28/2016		M&IE	Lodging & M&IE	54.00	PERSONAL	Yes

	06/29/2016	Lodging	Lodging & M&IE	125.10	GOVCC	Yes
⚠	Default Payment Method for this expense is not being used. Please verify for accuracy.					
	Comments: Conf Num: 83242107 Cmt: 6PM CANCEL DAY OF ARRIVAL					
	06/29/2016	M&IE	Lodging & M&IE	54.00	PERSONAL	Yes
	06/30/2016	M&IE	Lodging & M&IE	40.50	PERSONAL	Yes

Receipts

Manage receipts or other document attachments: View Receipts

Per Diem Allowances

Total Per Diem Allowance: 564.30

Details	Alert	Actions	Date	Per Diem Rate	Lodging Cost	Lodging Allowed	M&IE Cost	M&IE Allowed	Spec	B	L	D	Conf %
⌄			06/27/16	54.00	125.10	125.10	40.50	40.50					
⌄			06/28/16	54.00	125.10	125.10	54.00	54.00					
⌄			06/29/16	54.00	125.10	125.10	54.00	54.00					
⌄			06/30/16	54.00	0.00	0.00	40.50	40.50					

Additional Authorizations

Special Authorizations Exist

Other Authorization	Remarks
GOVT-OWNED VEHICLE AVAILABLE	GSA car will be used for this trip

Accounting Allocations

Accounting Total: 639.25

Alert	Organization	Label	Classification Code	Amount	Percent Allocated
	EPAR03AP	16 EPM2AP	MCB.20162017.B.03M00CA.501E44.MN030300.	511.40	80.00 %
	EPAR03AP	16 EPM8AP	MCB.20162017.B.03M00CA.501E50.MN030300.	127.85	20.00 %

Totals

Total Reimbursable: 639.25

Disbursement Type	Amount
Estimated Cost	639.25
Advance Requested	0.00

Trip Comments

View Comment History

GSA car will be used for this trip

Document Status

Current Status: POSACK OBLIGATION **Awaiting:** **for Status:**

Document Routing

Name	Status	Level

Document History (Current)

Display Full History

Date/Time	Status	Name	Remarks	Reason Desc
05/25/2016 10:02:58 AM	POSACK OBLIGATION	One, EAI User	EAI Document Status Update WS	
05/25/2016 7:51:16 AM	PENDING	SYSUTILITY	EAI Obligation Submitted	
05/25/2016 7:51:14 AM	APPROVED	BRANCH, RIETTA Renee'	**AUTO SIGNATURE WAS APPLIED**	
05/25/2016 7:29:30 AM	ADJUSTED	BRANCH, RIETTA Renee'	**AUTO SIGNATURE WAS APPLIED**	
05/25/2016 5:14:27 AM	AUTHORIZED	CAMPBELL, DAVID John	**AUTO SIGNATURE WAS APPLIED**	
05/23/2016 12:15:05 PM	SIGNED	Bradley, Megan Katherine	**AUTO SIGNATURE WAS APPLIED**	
05/23/2016 12:12:16 PM	CREATED	Megan Bradley	Auto-created from reservation - NEW DOCUMENT (TAA030JV)	

Document Adjustments

Level	Date	Time	Adjustor	Remarks
2	05/25/16	7:29AM	RIETTA BRANCH **	
1	05/23/16	12:12PM	Megan Bradley	Auto-created from reservation -

hagedorn, james

From: Jonelle S Scheetz <JSScheetz@uss.com>
Sent: Wednesday, June 15, 2016 12:24 PM
To: hagedorn, james
Cc: mdzurinko@uss.com; David W Hacker
Subject: Re: [External]-Inspection of Clairton Works

Mr. Hagedorn,

Thank you for sending us the email so we can begin to prepare for the inspection. I am expecting Mike, Dave Hacker, and myself, at a minimum, here at Clairton during your visit. I am starting to review the documents below, and will contact you with any questions. Please let us know if you need anything additional in the coming days before your arrival.

Thank you,

Jonelle Scheetz
Clairton Environmental
United States Steel Corporation
Office: 412-233-1015
Cell: 412-445-1946

From: "hagedorn, james" <hagedorn.james@epa.gov>
To: "mdzurinko@uss.com" <mdzurinko@uss.com>, "Deluca, Dean" <Dean.Deluca@AlleghenyCounty.US>
Cc: Jonelle S Scheetz <JSScheetz@uss.com>
Date: 06/14/2016 10:22 AM
Subject: [External]-Inspection of Clairton Works

I plan to drive out on June 27 and be in your plant on the 28th and 29th with two new employees, namely, Natalia Vazquez and Erin Malone. I want to teach them about coke plants and do some battery inspections. I would like to have a discussion with you when we get there on Tuesday around 9 AM. Please have the following information available for review during the inspection: any plans required to be developed and submitted under any applicable Part 63 MACT regulation, any Part 61 Subpart L and FF (coke plant and benzene waste regulations) reports and plans required to be maintained, any maintenance occurring at the present time, list of bad ovens and what is being done, test reports for any testing done in the last 2 years, Battery Standard Operating Procedures, coke production for the last 5 years, examples of any self- monitoring reports being generated or even data sheets (not Method 303 as we get those on a regular basis), future plans for the plant, fenceline monitoring if applicable, quench tower work done. As you know, my phone number is 215-814-2161, Natalia can be reached at X2121 and Erin is at X2190. Thank you for your cooperation. I would like to show Natalia and Erin as much as I can but they are not in the medical monitoring system so they have not been issued respirators. I know they can't go on the batteries themselves but I believe they can still do door inspections, stack inspections and pushing inspections as they are both Method 9 certified. Let me know if I need to know something.

hagedorn, james

From: Approval Queue <ApprovalDaemon@concursolutions.com>
Sent: Wednesday, May 25, 2016 10:51 AM
To: hagedorn, james; Bradley, Megan
Subject: Your request 'Hotel Reservation at Clairton, PA, USA' was approved.

Your request 'Hotel Reservation at Clairton, PA, USA' was approved.
Approved on 2016, May 25, Wednesday at 10:51 am Eastern Time by: RIETTA BRANCH Comments:

This is a system-generated email. Please do not reply.

hagedorn, james

From: Nothnagel, Susan
Sent: Tuesday, May 17, 2016 8:16 AM
To: hagedorn, james
Subject: RE: Medical Monitoring

Yep, James, you are still covered and have the OK.

Susan

From: hagedorn, james
Sent: Monday, May 16, 2016 3:06 PM
To: Nothnagel, Susan <Nothnagel.Susan@epa.gov>
Subject: Medical Monitoring

It seems that I just did the medical monitoring and got the OK from the doctor to wear the respirator. Am I still OK on this part of doing inspections? I do not really need to wear a respirator except for two types of inspections at coke plants.

hagedorn, james

From: Baldwin.Donna@epa.gov <admin@EZbook.com>
Sent: Tuesday, May 24, 2016 8:47 AM
To: hagedorn, james; Jackson, Joe-D; D'Alessandro, Thomas
Subject: Regarding your EZbook Booking

G61-0605R OUTLANDER (BLACK) reserved by Baldwin.Donna For:Hagedorn.Jim 2161 Additional Info:

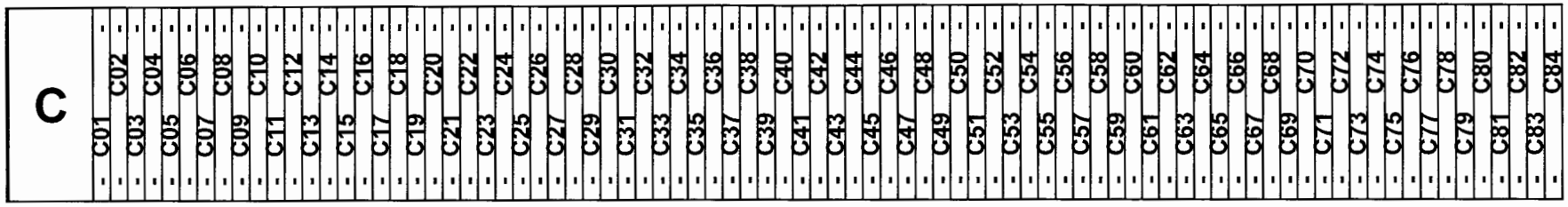
Starting 08:00 AM Mon 27 Jun 2016
Ending 07:00 AM Fri 1 Jul 2016
Hagedorn.Jim 2161
If you will be keeping a vehicle overnight at your residence,please have your supervisor approve this by email to R3 FLEET. If their are any changes and/or cancellations please submit them to R3_Fleet.
When picking up keys, please bring a valid drivers license.

Box Number 26 -
Destination - : Pittsburgh, Pa.
GPS -
Mail Code - : 3AP20
Number in Vehicle - : 2
Primary Driver - : Hagedorn.Jim
Request Number - : 144072621

Clairton

6/28/2016 | <<<<< South | North >>>>>

COKE SIDE



PUSHER SIDE

Normal Rotation	84
30 Hour	0
24 Hour	0
Work Into Series	0
48 Hour	0
Double Cycle	0

Patcher	0
Fosbel/United	0
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

Minimum Net Coking Time	0
Total # Of Ovens On Unit	84
Empty for Normal Decarbonization	0
tal Ovens Out (36,24,wis,dbl cycle,etc.)	0
Total Ovens Available	84

ojected Schedule Based On Availability	0

Note: To get accurate printouts, do not print until all batteries are correctly filled in for the day.

6/28/2016 <<<<< North South >>>>>

COKE SIDE

1

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A24	A25	A26	A27	A28	A29	A30	A31	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30	B31	C01	C02

PUSHER SIDE

6/28/2016 <<<<< North South >>>>>

COKE SIDE

2

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30	B31	C01	C02

PUSHER SIDE

6/28/2016 <<<<< North South >>>>>

COKE SIDE

3

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30	B31	C01	C02

PUSHER SIDE

Normal Rotation	177
30 Hour	0
24 Hour	0
Work Into Series	0
48 Hour	0
Double Cycle	11

Patcher	0
Fosbel/United	0
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

Minimum Net Coking Time	22
Total # Of Ovens On Unit	192
Empty for Normal Decarbonization	-4
Total Ovens Out (36,24,wis,dbl cycle,etc.)	-9.5
Total Ovens Available	178.5

Projected Schedule Based On Availability	194.73

6/28/2016 <<<<< South North >>>>>

COKE SIDE

13

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30

PUSHER SIDE

6/28/2016 <<<<< South North >>>>>

COKE SIDE

14

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30

PUSHER SIDE

6/28/2016 <<<<< South North >>>>>

COKE SIDE

15

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30

PUSHER SIDE

Normal Rotation	178
30 Hour	0
24 Hour	0
Work Into Series	1
48 Hour	0
Double Cycle	0

Patcher	2
Fosbel/United	1
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	1
Sticker	0

Minimum Net Coking Time	36
Total # Of Ovens On Unit	183
Empty for Normal Decarbonization	0
Total Ovens Out (36,24,wis,dbl cycle,etc.)	-2.75
Total Ovens Available	180.25

Projected Schedule Based On Availability	120.17

6/28/2016	<<<<< North South >>>>>

COKE SIDE

Battery	C29	C28	C27	C26	C25	C24	C23	C22	C21	C20	C19	C18	C17	C16	C15	C14	C13	C12	C11	C10	C09	C08	C07	C06	C05	C04	C03	C02	C01
19	C29	C28	C27	C26	C25	C24	C23	C22	C21	C20	C19	C18	C17	C16	C15	C14	C13	C12	C11	C10	C09	C08	C07	C06	C05	C04	C03	C02	C01

Battery	B29	B28	B27	B26	B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B09	B08	B07	B06	B05	B04	B03	B02	B01
19	B29	B28	B27	B26	B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B09	B08	B07	B06	B05	B04	B03	B02	B01

Battery	A29	A28	A27	A26	A25	A24	A23	A22	A21	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A09	A08	A07	A06	A05	A04	A03	A02	A01
19	A29	A28	A27	A26	A25	A24	A23	A22	A21	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A09	A08	A07	A06	A05	A04	A03	A02	A01

PUSHER SIDE

6/28/2016	<<<<< North South >>>>>

COKE SIDE

Battery	C29	C28	C27	C26	C25	C24	C23	C22	C21	C20	C19	C18	C17	C16	C15	C14	C13	C12	C11	C10	C09	C08	C07	C06	C05	C04	C03	C02	C01
20	C29	C28	C27	C26	C25	C24	C23	C22	C21	C20	C19	C18	C17	C16	C15	C14	C13	C12	C11	C10	C09	C08	C07	C06	C05	C04	C03	C02	C01

Battery	B29	B28	B27	B26	B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B09	B08	B07	B06	B05	B04	B03	B02	B01
20	B29	B28	B27	B26	B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B09	B08	B07	B06	B05	B04	B03	B02	B01

Battery	A29	A28	A27	A26	A25	A24	A23	A22	A21	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A09	A08	A07	A06	A05	A04	A03	A02	A01
20	A29	A28	A27	A26	A25	A24	A23	A22	A21	A20	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A09	A08	A07	A06	A05	A04	A03	A02	A01

PUSHER SIDE

Normal Rotation	170
30 Hour	0
24 Hour	0
Work Into Series	3
48 Hour	0
Double Cycle	0

Patcher	0
Fosbel/United	0
Purge	1
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

Minimum Net Coking Time	35.5
Total # Of Ovens On Unit	174
Empty for Normal Decarbonization	0
Total Ovens Out (36,24,wis,dbl cycle,etc.)	-1
Total Ovens Available	173
Projected Schedule Based On Availability	116.96

Note: To get accurate printouts, do not print until all batteries are correctly filled in for the day.

6/28/2016 | <<<<< South | North >>>>>

COKE SIDE

B

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36	A37	A38	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30	B31	B32	B33	B34	B35	B36	B37

PUSHER SIDE

Normal Rotation	73
30 Hour	0
24 Hour	0
Work Into Series	2
48 Hour	0
Double Cycle	0

Patcher	0
Fosbel/United	0
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

Minimum Net Coking Time	22.5
Total # Of Ovens On Unit	75
Empty for Normal Decarbonization	-1
Total Ovens Out (36,24,wis,dbl cycle,etc.)	-0.5
Total Ovens Available	73.5

Projected Schedule Based On Availability	78.4

Note: To get accurate printouts, do not print until all batteries are correctly filled in for the day.

6/28/2016 | <<<<< South | North >>>>>

COKE SIDE

C	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PUSHER SIDE

Normal Rotation	84
30 Hour	0
24 Hour	0
Work Into Series	0
48 Hour	0
Double Cycle	0

Patcher	0
Fosbel/United	0
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

Minimum Net Coking Time	0
Total # Of Ovens On Unit	84
Empty for Normal Decarbonization	0
tal Ovens Out (36,24,wis,dbl cycle,etc.)	0
Total Ovens Available	84

ojected Schedule Based On Availability	0

Note: To get accurate printouts, do not print until all batteries are correctly filled in for the day.

6/28/2016 | <<<<< South | North >>>>>

COKE SIDE

C

C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PUSHER SIDE

Normal Rotation	84
30 Hour	0
24 Hour	0
Work Into Series	0
48 Hour	0
Double Cycle	0

Patcher	0
Fosbel/United	0
Purge	0
MT For Repair > 8 hrs	
Permanently Banked	0
Sticker	0

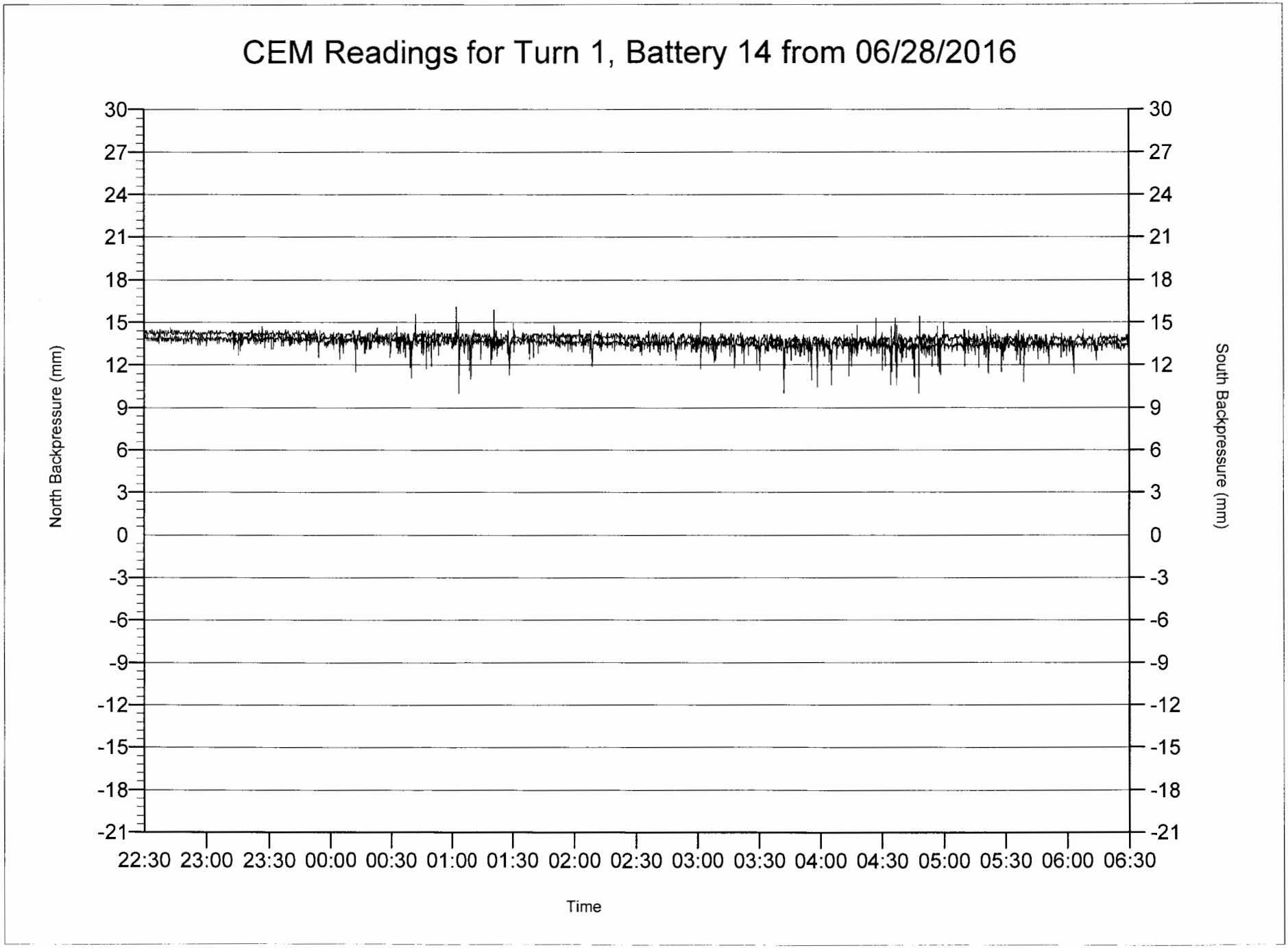
Minimum Net Coking Time	0
Total # Of Ovens On Unit	84
Empty for Normal Decarbonization	0
tal Ovens Out (36,24,wis,dbl cycle,etc.)	0
Total Ovens Available	84

ojected Schedule Based On Availability	0

Note: To get accurate printouts, do not print until all batteries are correctly filled in for the day.

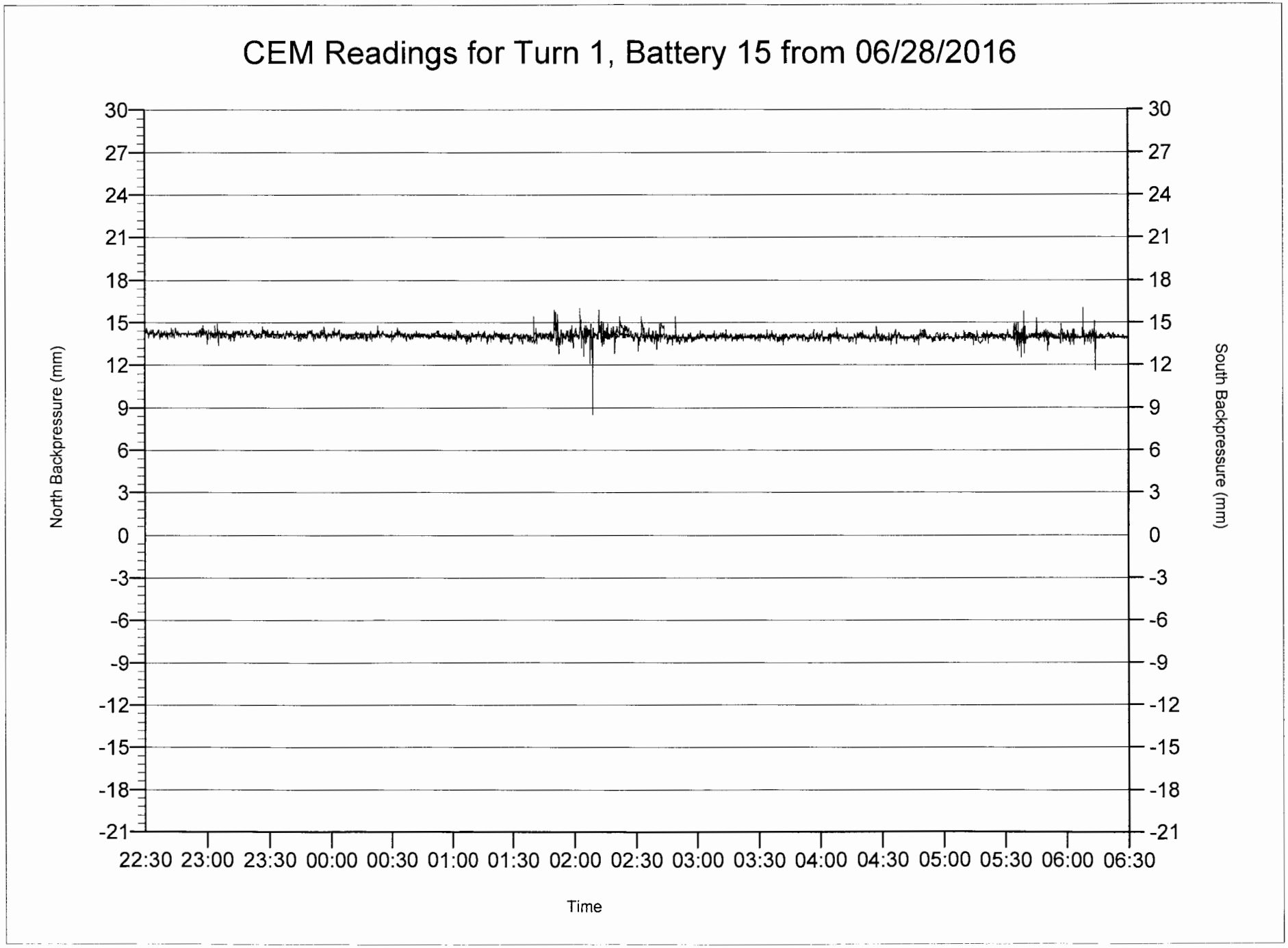
Printed: 6/29/2016 11:18:20 AM

North Backpressure (mm) Average: 13.84
South Backpressure (mm) Average: 13.48



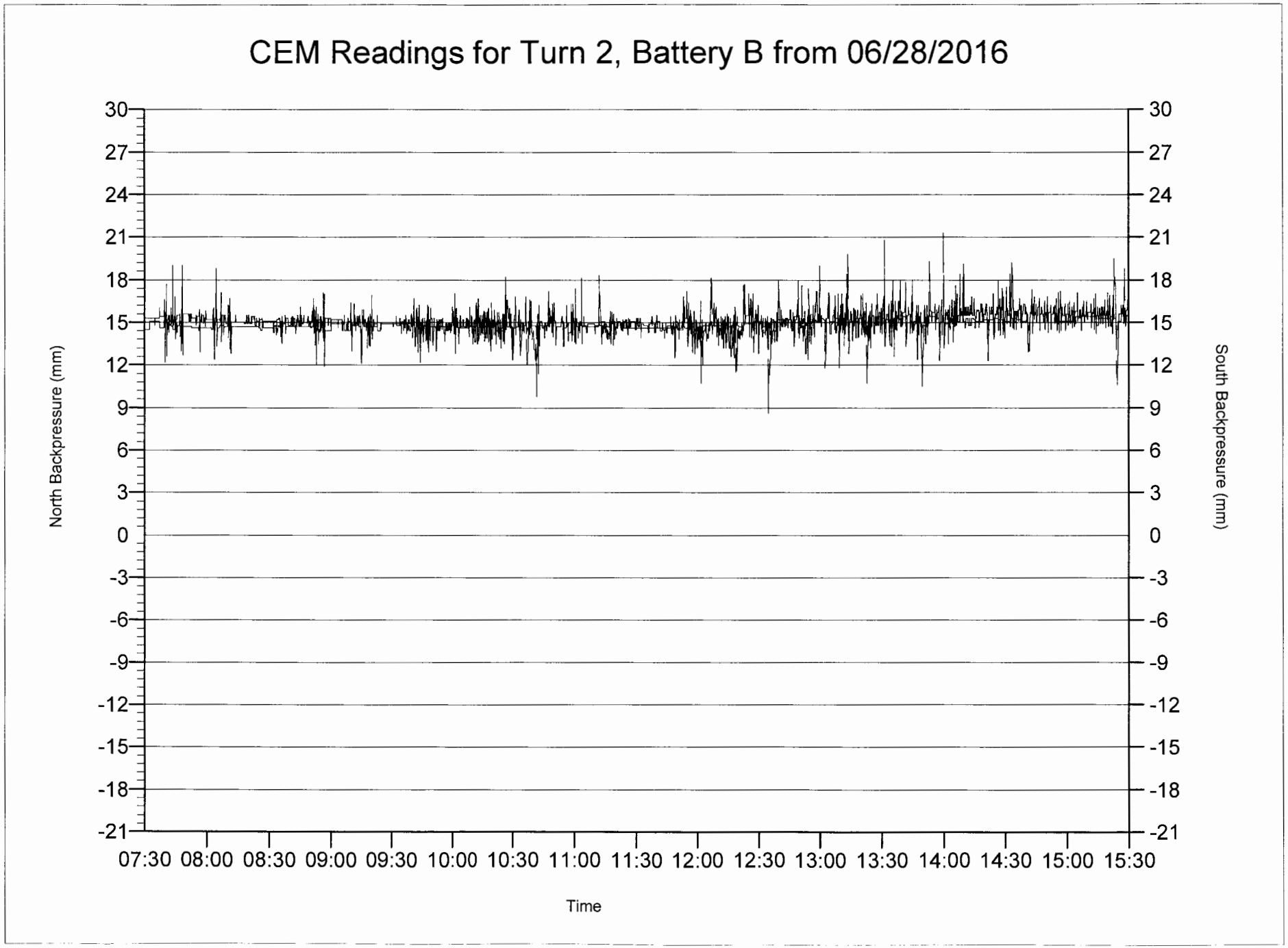
Printed: 6/29/2016 11:18:44 AM

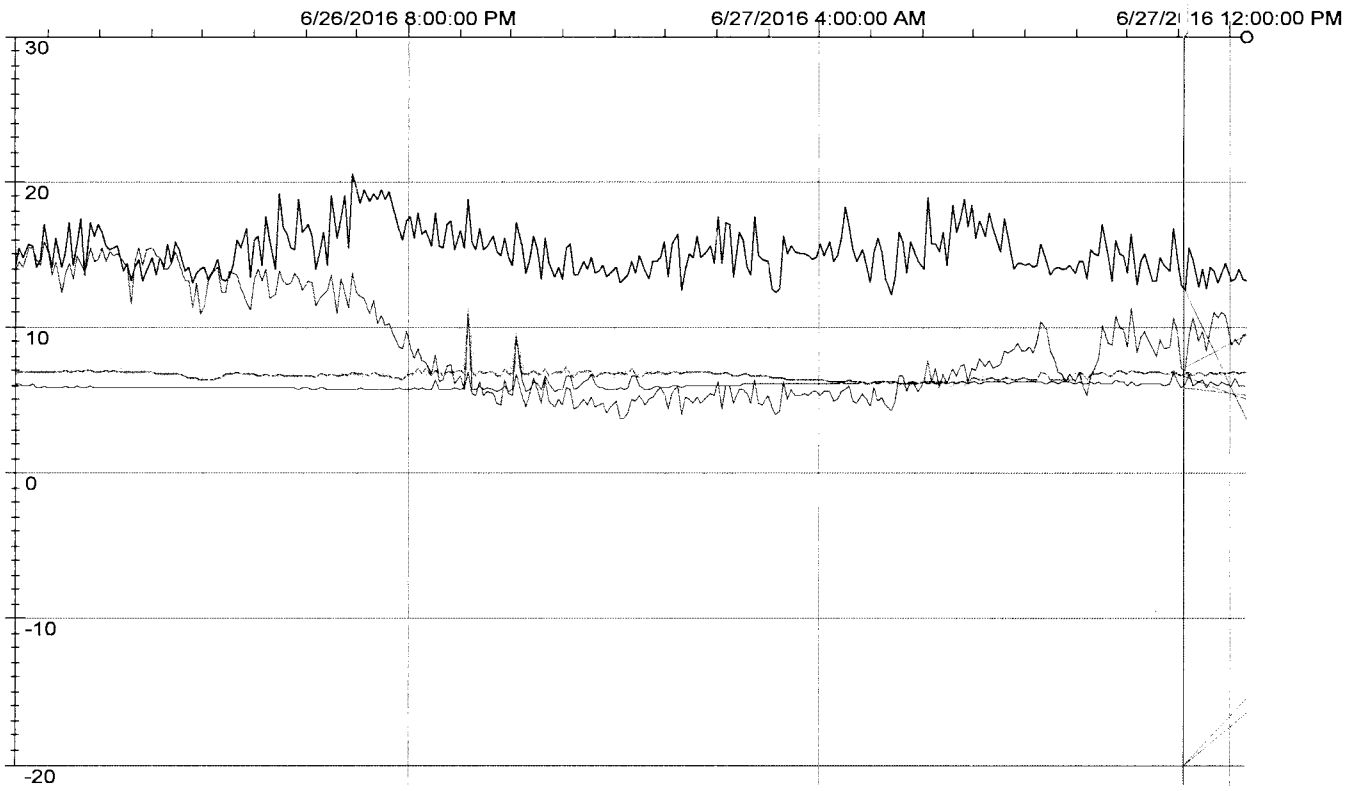
North Backpressure (mm) Average: 14.04
South Backpressure (mm) Average: 14.06



Printed: 6/29/2016 11:24:30 AM

North Backpressure (mm) Average: 14.88
South Backpressure (mm) Average: 15.05

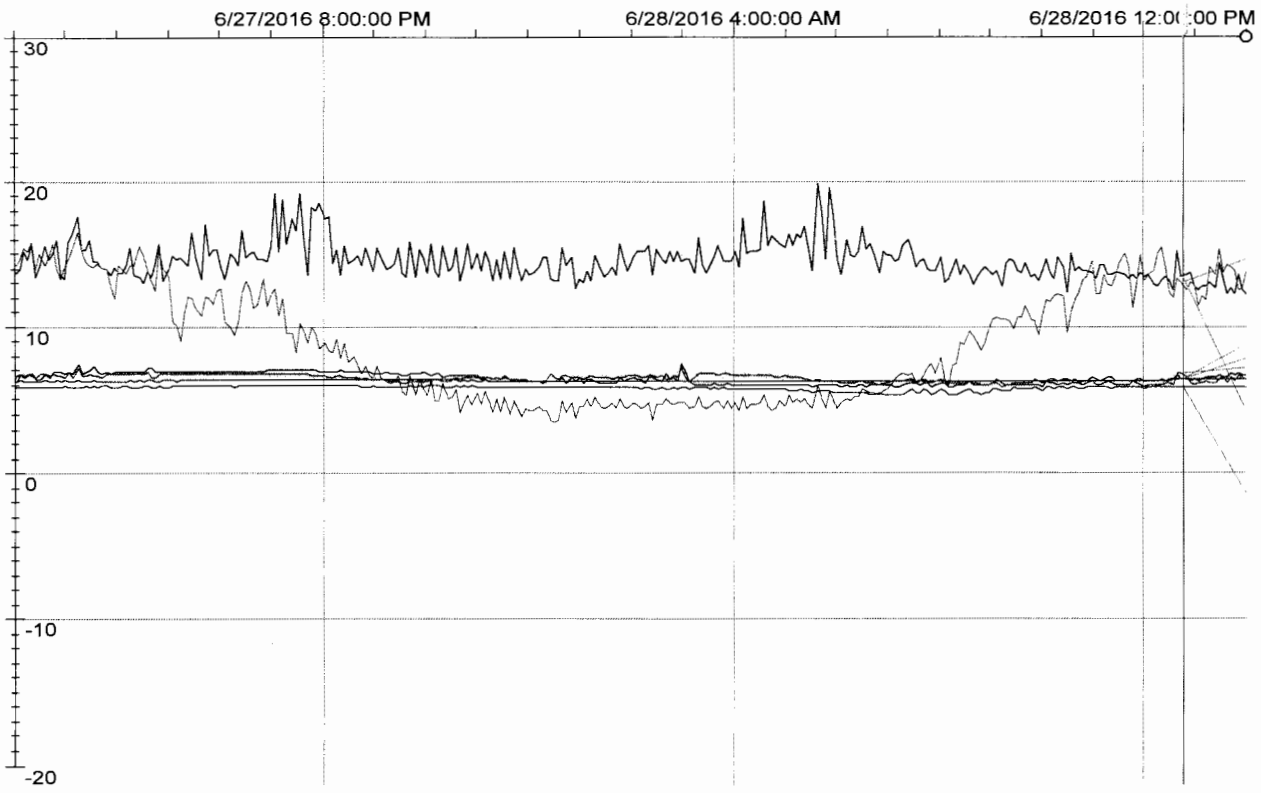




Legend

	Name	Start	End	Duration	Scale	Units	Min	Max	Avg	Std Deviation
	B1RRrS_Suction	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-500 - 0		-178.171333	-95.151177	-147.637333	16.02385
	B3RRrN_Suction	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-500 - 0		-262.206516	-141.958903	-213.09514	35.580683
	B2RRrN_CS_Back_Pres s	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-20 - 30		-20	-20	-20	0
	B2RRrN_PS_Back_Pres s	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-20 - 30		-20	-20	-20	0
	B2RRrS_CS_Back_Pres s	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-20 - 30		5.559866	10.93243	6.039721	0.407707
	B2RRrS_PS_Back_Press	6/26/2016 12:20:09 PM	6/27/2016 12:20:09 PM	1d 00:00:00	-20 - 30		6.096558	11.369982	6.726738	0.407052

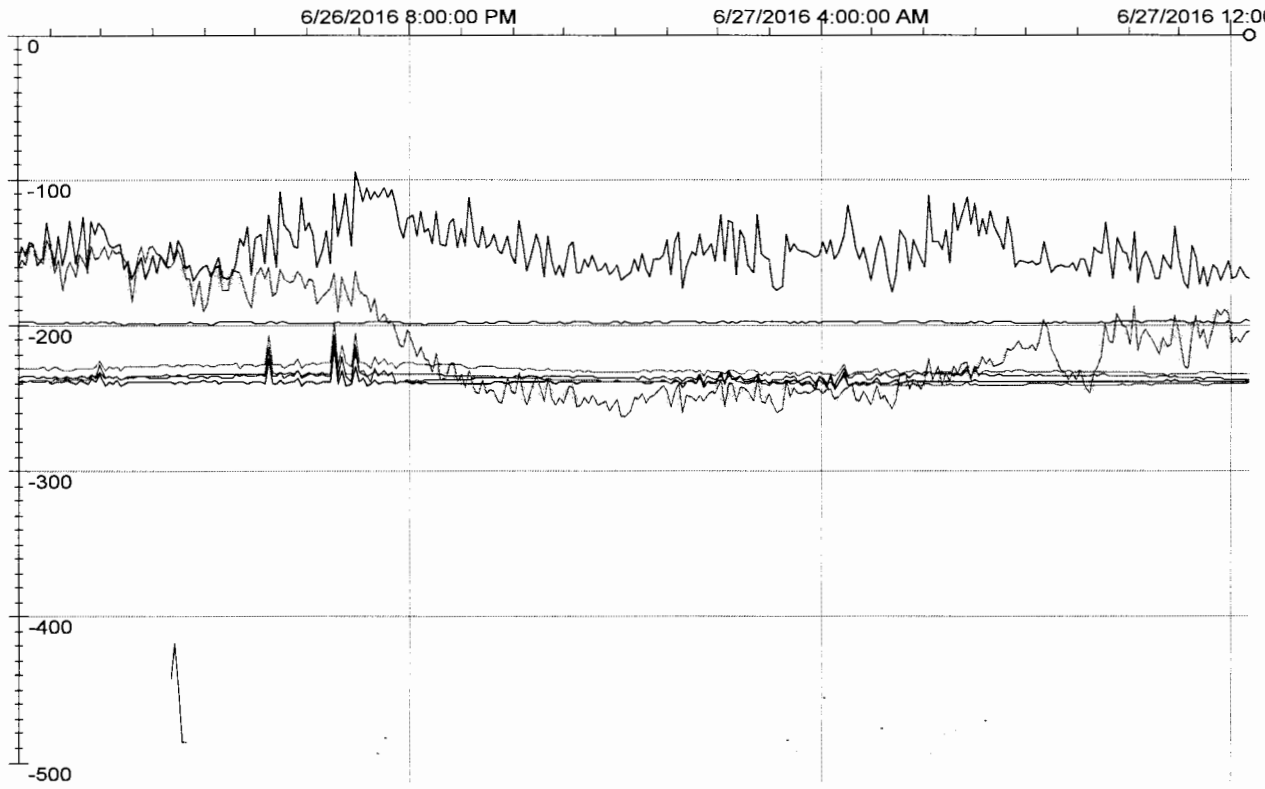
2 BATTERY



Legend

	Name	Start	End	Duration	Scale	Units	Min	Max	Avg	Std Deviation
	B1RRrS_Suction	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-500 - 0		-177.435821	-102.196615	-154.271653	13.007697
	B3RRrN_Suction	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-500 - 0		-264.62793	-134.469238	-212.296381	38.73011
	B3RRrN_CS_Back_Press	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-20 - 30		5.27404	5.991591	5.803201	0.161129
	B3RRrN_PS_Back_Press	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-20 - 30		6.222949	6.456125	6.312516	0.058118
	B3RRrS_CS_Back_Press	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-20 - 30		5.829801	7.526511	6.472213	0.383382
	B3RRrS_PS_Back_Press	6/27/2016 2:00:00 PM	6/28/2016 2:00:00 PM	1d 00:00:00	-20 - 30		5.896031	7.189404	6.455788	0.27652

3 BATTERY



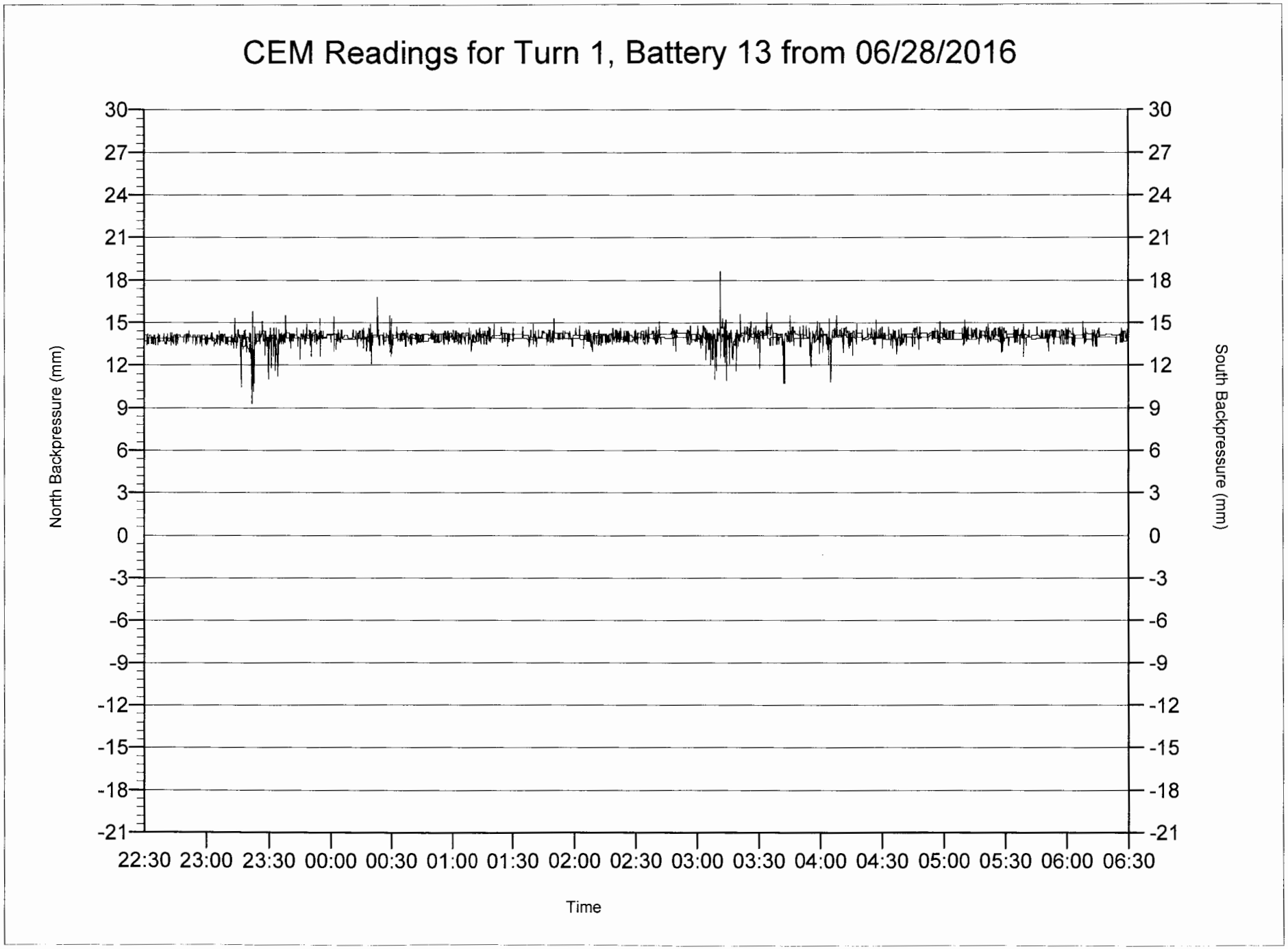
Legend

	Name	Start	End	Duration	Scale	Units	Min	Max	Avg	Std Deviation
	B1OSrOpacity_Rdg	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	0 - 100		0	16.394412	3.429338	3.189862
	B1RRrAsp_Steam_Press	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	0 - 100		60.058209	60.707916	60.357969	0.104237
	B1RRrN_CS_Back_Press	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-20 - 30		5.554009	8.51658	6.134993	0.229339
	B1RRrN_PS_Back_Press	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-20 - 30		5.740047	9.204058	6.273078	0.397421
	B1RRrS_CS_Back_Press	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-20 - 30		5.90089	9.326986	6.49442	0.297497
	B1RRrS_PS_Back_Press	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-20 - 30		6.452525	10.25402	7.006514	0.385509
	B1RRrS_Suction	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-500 - 0		-178.171333	-95.151177	-147.643652	16.02385
	B3RRrN_Suction	6/26/2016 12:21:00 PM	6/27/2016 12:21:00 PM	1d 00:00:00	-500 - 0		-262.206518	-141.958903	-213.121629	35.580683

1 BATTERY

Printed: 6/29/2016 11:17:44 AM

North Backpressure (mm) Average: 13.88
South Backpressure (mm) Average: 14.06



U. S. Steel Clairton Works – 2016 Baghouse Work

19/20 PEC Baghouse - Complete

- Mass air cooler (door repair, fixed cracks holes, cut out rods, fixed elbows)
- Cladding of square duct for structural support
- Repaired exhaust damper from module

13/15 PEC Baghouse - Complete

- Took down all elbows and rebuilt from taper duct to inlet of the module
- Replaced 5'X5' section of mass air cooler
- Repair mass air cooler door and holes and cracks

No. 4 Screening Station - Ongoing

- Cleaned out duct and modules
- Epoxy coated cages replaced existing galvanized cages
- Replaced bags
- Finishing cleanout and start up

1-3 PEC Baghouse - Planned Work – Targeted Completed by End of 2016

- 5 Week Outage – Contractor – 4 Fan Operation
    - Module Replacement (all 5)
    - Round Duct (from exhaust to fan damper)
    - Bag Change and Cage Replacement
    - Platco (Double belt valve)
    - New cleaning cycle system and boxes
    - Re-run all electrical

19/20 Baghouse - Planned Work - Targeted Completed by End of 2016

- 5 Week Outage – In House - 4 Fan Operation
    - Round duct replacement
    - 65% of original (30+ years)

United States Steel Corporation
Clairton Plant
400 State Street
Clairton, PA 15025

April 22, 2016

Mr. William U. Clark
Air Quality Program
Allegheny County Health Department
301 39th Street, Building #7
Pittsburgh, PA 15201-1891

Re: U. S. Steel – Mon Valley Works – Clairton Plant
Planned Outage Report – 13-15 Battery PEC System
USS Reference No.: 16-0058 ACHD Reference No.: 19723

Dear Mr. Clark,

Please see the following response to the inquiry regarding the 13-15 Battery PEC System Planned Outage Report.

During February 2016, Clairton Plant submitted planned outage reports and received approval for 13-15 Batteries and 19/20 Batteries PEC Systems to conduct duct work inspections. The inspections were completed, and it was found that significant maintenance and extensive repairs are mandatory for the continued operation of the systems. The repairs that were identified include: interior cladding of the square duct inlet from the mass air cooler elbow repair, repair holes in the mass air cooler, inspect and repair modules, inspect bags, greasing motors, repair crossover belts, inlet pipe from module to damper.

In order to ensure that the PEC Systems are operated in accordance with all applicable requirements and kept in good operating condition, it is necessary for these repairs. The repairs will also insure continued compliance with the permit limits and opacity standards.

U. S. Steel's standard procedure for PEC System Outages is to extend coking time for at least one hour from normal coking time (approximately 18 hours) to mitigate emissions ie. ensure entire coke mass is coked out. Due to poor market conditions, the 13-15 and 19/20 Batteries have been operating at reduced schedule since the third quarter of 2016, resulting in a minimum of 36 hour coking time. In addition, regularly required

visible emission observations are conducted through outage periods to maintain compliance.

Safety is a core value at U. S. Steel and the structural integrity of the PEC Systems were also evaluated in these inspections. The square duct of the PEC System not only serves to carry the gas stream from the hood to the baghouse, but is also the support that the hood travels on. A minimal reduction in structural integrity could result in a catastrophic failure of the system in addition to putting employees working both on the maintenance of the duct and on the battery in life threatening danger.

In the past, U. S. Steel has performed outages on the PEC Systems in five day periods over several months. It is our position that one longer outage will curtail the overall amount of possible emissions versus several shorter outages. Fewer start up and shutdowns will take less time and proves much more efficient. The efficiency of a longer one-time outage will allow for more proactive repairs to be completed, allowing for continued compliance with environmental standards and good engineering practices. The proactive work that is executed within this outage will greatly reduce the likelihood of failures that would lead to an unplanned outage, and therefore a complete shutdown of the system. Unplanned outage duration would be much longer because the equipment, people, and planning would not be in place as they are with this planned outage. This plan will also ensure that catastrophic failures are avoided from putting back into service the parts of the system that have not been repaired as would be required with shorter outages over longer periods of time. Environmental compliance is a core value of U. S. Steel, and the goal of planned maintenance is to minimize the emission impact associated with unplanned outages and repairs.

If you have any questions, please contact me at (412) 233-1015.

Sincerely,

Jonelle S. Scheetz
Environmental Engineer

United States Steel Corporation
Clairton Works

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40 CFR 63 Subpart CCCCC
National Emission Standards for Hazardous Air Pollutants
For Coke Ovens: Pushing, Quenching and Battery Stacks

- **Operation and Maintenance Plan**
- **Site-Specific Monitoring Plan**
- **Startup, Shutdown and Malfunction Plan**
- **Site-Specific Soaking Work Practice Plan**

Applicable to the following:

- **Processes:**
  - **Battery 1 consisting of 64 3-meter ovens**
  - **Battery 2 consisting of 64 3-meter ovens**
  - **Battery 3 consisting of 64 3-meter ovens**
  - **Battery 13 consisting of 61 3-meter ovens**
  - **Battery 14 consisting of 61 3-meter ovens**
  - **Battery 15 consisting of 61 3-meter ovens**
  - **Battery 19 consisting of 87 4-meter ovens**
  - **Battery 20 consisting of 87 4-meter ovens**
  - **B Battery consisting of 75 6-meter ovens**
  - **C Battery consisting of 84 6-meter ovens**

- **Capture Systems:**
  - **1-3 PEC Hood, duct, fan, and dampers**
  - **13-15 PEC Hood, duct, fan, and dampers**
  - **19/20 PEC Hood, duct, fan, and dampers**
  - **B Battery Shed, fan, and dampers**
  - **C Battery Coke Transfer Car, duct, fan, and dampers**

Approved By: *Coleen Davis*
Effective Date: 11/19/2012
Supercedes Date: 8/23/2012

- **Control Equipment:**
  - **1-3 PEC Baghouse**
  - **13-15 PEC Baghouse**
  - **19/20 PEC Baghouse**
  - **B Battery Baghouse**
  - **C Battery Baghouse**

- **Continuous Parametric Monitoring Systems:**
  - **Battery 1 Stack Opacity Monitoring System**
  - **Battery 2 Stack Opacity Monitoring System**
  - **Battery 3 Stack Opacity Monitoring System**
  - **Battery 13 Stack Opacity Monitoring System**
  - **Battery 14 Stack Opacity Monitoring System**
  - **Battery 15 Stack Opacity Monitoring System**
  - **Battery 19 Stack Opacity Monitoring System**
  - **Battery 20 Stack Opacity Monitoring System**
  - **B Battery Stack Opacity Monitoring System**
  - **C Battery Stack Opacity Monitoring System**
  - **1-3 PEC Baghouse Fan Amp Measuring System**
  - **13-15 PEC Baghouse Fan Amp Measuring System**
  - **19/20 PEC Baghouse Fan Amp Measuring System**
  - **B Battery Baghouse Fan Amp Measuring System**
  - **C Battery Baghouse Fan Amp Measuring System**
  - **1-3 PEC Baghouse Bag Leak Detection System**
  - **13-15 PEC Baghouse Bag Leak Detection System**
  - **19/20 PEC Baghouse Bag Leak Detection System**
  - **B Battery Baghouse Bag Leak Detection System**
  - **C Battery Baghouse Bag Leak Detection System**

Table of Contents

1.0 Introduction

1.1 Background

National Emissions Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks, were promulgated under 40 CFR 63 Subpart CCCCC on April 14, 2003. The standards specify the following as affected facilities under 40 CFR 63 Subpart CCCCC:

- each coke oven battery

The standards address emissions from each of the following emission sources:

- pushing
- soaking
- quenching
- battery stacks

1.2 Purpose

These standards require that certain plans be developed and implemented by April 14, 2006. The purpose of this document is to comply with the requirements of 40 CFR 63 Subparts A and CCCCC to develop and implement the following plans:

- Operation and maintenance plan
- Site-specific monitoring plan
- Startup, shutdown and malfunction plan
- Site-specific soaking work practice plan – contained in ISO Procedure PL.04.06.03

1.3 Applicability

1.3(a) Operation and Maintenance Plan

40 CFR 63.7300 requires that a written Operation and Maintenance plan be developed and implemented for the following process equipment, particulate emission capture systems* and particulate emission control devices:

- Each by-product coke oven battery
- Each particulate emission capture system applied to pushing
- Each particulate emission control device applied to pushing

* For purposes of this plan, "emission capture system" includes emission capture hoods, ductwork, dampers and fans important to the efficient collection and transport of particulate emissions to a particulate emission control device. The

particulate emission control device (baghouse and associated filter media) is not part of the particulate emission capture system.

1.3(b) Site-Specific Monitoring Plan

40 CFR 63.7331(b) requires that a Site-Specific Monitoring Plan be developed and implemented for each Continuous Parametric Monitoring System (CPMS) required in 40 CFR 63.7330. Therefore, each CPMS associated with each particulate emission capture system and each particulate emission control device required to have an Operation and Maintenance Plan, listed in 1.3.(a) above, is also required to have a Site-Specific Monitoring Plan.

1.3(c) Startup, Shutdown and Malfunction Plans

40 CFR 63.7310(c) requires that a written Startup, Shutdown and Malfunction Plan be developed and implemented according to the requirements of 40 CFR 63.6(e)(3), which states in part:

> *"...The owner or operator of an affected source must develop and implement a written startup, shutdown and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard."*

Therefore, the Startup, Shutdown and Malfunction Plan must address all process, particulate emission control equipment and monitoring equipment used to comply with the standard.

2.0 Operation and Maintenance Plan

2.1 Scope

The following process equipment, particulate emission capture systems, and particulate emission control devices are covered by this plan:

- By-product coke oven batteries
  - Battery 1
  - Battery 2
  - Battery 3
  - Battery 13
  - Battery 14
  - Battery 15
  - Battery 19
  - Battery 20
  - B Battery
  - C Battery
- Particulate emission capture systems
  - 1-3 PEC Hood, duct, fan, and dampers
  - 13-15 PEC Hood, duct, fan, and dampers
  - 19/20 PEC Hood, duct, fan, and dampers
  - B Battery Shed, fan, and dampers
  - C Coke Transfer Car, duct, fan, and dampers
- Particulate emission control devices
  - 1-3 PEC Baghouse including filter media
  - 13-15 PEC Baghouse including filter media
  - 19/20 PEC Baghouse including filter media
  - B Battery Baghouse including filter media
  - C Battery Baghouse including filter media

2.1.1 The purpose of this plan is to ensure that the above are operated and maintained in a manner consistent with good air pollution control practices. (63.7300(a))

2.1.2 Definitions

2.1.2.1 Capture system includes the hood, dampers, ductwork, and fans.

2.1.2.2 Control device consists of the filter media bags and the associated housing.

2.1.2.3 Process equipment includes the batteries and all associated equipment including heating system.

2.2 Plan Elements for By-Product Coke Oven Batteries (63.7300(b))

2.2.1 Underfiring Gas Parameters Monitored

Parameter	Frequency	Recording Method	Regulatory Citation
Wobbe	Continuous	CMS Records	63.7300(b)(1)

Volume	Continuous	CMS Records	63.7300(b)(1)
Pressure	Continuous	CMS Records	63.7300(b)(1)

2.2.2 Flue and Crosswall Temperatures

2.2.2.1

Parameter	Frequency	Recording Method	Regulatory Citation
Control Flue Temps	Daily	CMS Records	63.7300(b)(2)
Battery Crosswalls	Monthly	CMS Records	63.7300(b)(2)

2.2.2.2 Control Flue span temperatures will be read and recorded on available ovens daily by representatives of the Battery Heating Department. If temperatures cannot be taken due to safety concerns or unforeseen and uncontrollable circumstance, this will be documented in the heaters' log. (63.7300(b)(2))

2.2.2.3 Battery Crosswall Temperatures will be read and recorded monthly on available ovens by representatives of the Battery Heating Department. (63.7300(b)(2))

2.2.3 Prevention of pushing ovens not fully coked (63.7300(b)(3))

2.2.3.1 The Soaking Work Practice Plan will be implemented as a means of control.

2.2.3.2 Battery flue aim temperatures will be determined by the Battery Heating Department using recorded underfire (UF) gas parameters, coal information, observation of coke conditions, and desired production schedule. Underfire gas volume will be determined based on battery span temperature and/ or the use of a computer model.

2.2.3.3 Pusher machine operators will visibly inspect the coke prior to pushing. Ovens showing signs of incomplete coking will be evaluated by the shift manager or designee to determine if the pushing sequence can commence. If it is determined that additional coking time is required, the doors will be put back on the oven and notify the Heating Department. That oven will not be pushed until fully coked.

2.2.4 Overcharge and Undercharge Prevention (63.7300(b)(4))

2.2.4.1 Coal Parameters Monitored

Parameter	Frequency	Recording Method	Regulatory Citation
Coal Moisture	Continuous	CMS Records	63.7300(b)(4)
Coal Bulk Density	Continuous	CMS Records	63.7300(b)(4)

2.2.4.2 Bulk density of coal charged will be controlled to set points determined by management. Oil addition will be the primary means of control. (63.7300(b)(4))

2.2.4.3 Management will determine volumetric set points based on oven filling observation. (63.7300(b)(4))

2.2.4.4 Larry car operators will visibly check volumetric hoppers to ensure proper filling and complete discharge into ovens. (63.7300(b)(4))

2.2.4.5 Pusher machine operators will level each oven charged and report abnormal conditions to supervisor. (63.7300(b)(4))

2.2.4.6 Pusher machine operator will communicate with the larry car operator to ensure that leveling bar is pulling back coal from each oven.

2.2.5 Inspection of Flues, Burners and Nozzles (63.7300(b)(5))

2.2.5.1

Equipment	Frequency	Recording Method	Regulatory Citation
Flues	Monthly	Electronic	63.7300(b)(5)
Burners	Monthly	Electronic	63.7300(b)(5)
Nozzles	Monthly	Electronic	63.7300(b)(5)

2.2.5.2 Representatives of the Battery Heating Department will inspect flues, burners and nozzles at least monthly on each available oven. Repair requirements will be documented in the PSM section of the network. (63.7300(b)(5))

2.3 Quench Tower Baffle Washing Frequency Schedule and Procedures. (63.7300(b)(6))

2.3.1

Tower	Frequency	Recording Method	Regulatory Citation
All Primary Towers	Daily	CMS Records	63.7300(b)(6) & 63.7295(b)(2)
Baffle inspection for 95% cross sectional coverage	Monthly	CMS Records	63.7295 (b)(1) and (3)
Auxiliary Towers	NA unless lose backup status	NA	

2.3.2 Quench Tower Baffle Washing will be conducted using automated controls. Baffles will be washed at least once per day unless the ambient temperature does not rise above 30 degrees F at any time during the 24-hour day. The baffles will be manually washed in the event that the automatic system is not available. (63.7295(b)(2)(I)

2.3.3 The concentration of total dissolved solids (TDS) in the quench water will be maintained at or below 1,100 milligrams per liter (mg/L) using acceptable makeup water. (63.7295(a)(1)(i)

2.3.4 Repairs or replacement of damaged or missing baffles will be initiated within 30 days and completed as soon as is practical. (63.7295(b)(4)

2.4 Pushing Emission Capture and Control Systems

2.4.1 The baghouse servicing B Battery will be operated such that the emissions from the baghouse will not exceed 0.01 grain/ dscf as measured the front half captured on the test filter. (63.7290(a)(1))

2.4.2 The baghouses servicing 1-3, 13-15, 19/20, and C Batteries will be operated such that the emissions form the baghouse will not exceed 0.02 pound/ ton of coke as measured on the front half of the test filter. (63.7290(a)(2))

2.4.3 Equipment inspection of capture systems (63.7300(c)(1))

Equipment	**Inspection Frequency**	**Inspecting Department**	**Recording Method**	**Regulatory Citation**
Ductwork (external)	Monthly	Maintenance	ERP	63.7300(c)(2)
Hoods	Monthly	Maintenance	ERP	63.7300(c)(2)
Fan Integrity	Monthly	Vibration analyst	Internet	63.7300(c)(2)
Baghouse Gas Inlet Dampers	Monthly	Maintenance	ERP	63.7300(c)(2)
#1 & #2 Baghouse Fresh Air Dampers	Monthly	Maintenance	ERP	63.7300(c)(2)
Fan Inlet Dampers	Monthly	Maintenance	ERP	63.7300(c)(2)
Fan Bearings and Couplings	Monthly	Vibration analyst	Internet	63.7300(c)(2)
Fan Motor Bearings	Monthly	Vibration analyst	Internet	63.7300(c)(2)
#1 & #2 Baghouse Gas Inlet Damper Cylinders	Monthly	Maintenance	ERP	63.7300(c)(2)
#1 & #2 Baghouse Fresh Air Damper Actuators	Monthly	Maintenance	ERP	63.7300(c)(2)

2.4.4 All deficiencies found during inspections listed in the above table such as holes, deformation-affecting flow, or other conditions affecting performance will be recorded in ERP. Corrective action will be completed before the next scheduled inspection.

2.4.4.1 The baghouse inlet suction pressure will be reviewed monthly as an indicator of the presence of flow restrictions caused by dents or accumulated dust in the ductwork on #1, #2 and C Baghouses. (Not applicable on B Battery) (63.733(c)(1)

2.4.4.2 The baghouse inlet suction pressure and stub duct pressure will be reviewed monthly to verify the functionality of the pressure sensors on #1, #2 and C Baghouses. (Not applicable on B Battery). (63.733(c)(1)

2.4.4.3 Fan amps will be reviewed on 1, 2, and C Baghouses to verify proper fan inlet damper operation. (63.733(c)(1)

2.4.4.4 On B Battery Baghouse, flow and fan amps will be reviewed to ensure proper fan inlet damper operation. (63.733(c)(1)

2.4.5 Preventive Maintenance Schedule for Control Devices

Equipment	PM Frequency	PM Task	Recording	Regulatory Citation
#1 & #2 Baghouse Air Compressors	Quarterly	Change Oil	ERP	63.7300(c)(2)
'B' Baghouse Air Compressors	Semi-Annual	Change Oil	ERP	63.7300(c)(2)
'B' Baghouse Bags	24 Months	Replace	ERP	63.7300(c)(2)
#1 & #2 Baghouse Bags	36 Months	Replace	ERP	63.7300(c)(2)

2.4.6 Bag Leak Detection System – Corrective Action Plan (63.7300(c)(3)

2.2.10.1 A bag leak detection probe will be installed in each baghouse module. An audible and visual alarm will initiate when dust levels are above the predetermined level in the Mixing Station and a visual alarm will initiate at the baghouse.

2.2.10.2 The Mixing Station operator will acknowledge the audible alarm and then notify via plant radio and/or telephone PEC Electrical or designee.

2.2.10.3 PEC Electrical or designee will acknowledge the alarm within 1 hour of the alarm (63.7300(c)(3) on the panel view (the visual alarm at the Mixing Station will also show this acknowledgement). PEC Electrical or designee will take one or more of the following actions:

2.2.10.3.1 Clean the probe and observe levels after cleaning to determine if a dirty probe was the cause of the alarm. (63.7300(c)(3)(v) Notify the Mixing Station that the situation is resolved; and/ or

2.2.10.3.2 Determine if the probe is functioning properly. Repair bag leak detection system. (63.7300(c)(3)(v) If the probe is not functioning properly and cannot be corrected within an hour of the initial alarm,

notify the Mixing Station of a Bag Leak Detection System breakdown; and/or

2.2.10.3.3 Shut the affected module down. Notify the Mixing Station and operations of a PEC breakdown. (63.7300(c)(3)(iv)

2.2.10.3.4 The Mixing Station will follow the procedure for notifying ACHD and others according to the applicable breakdown procedure.

2.2.10.4 Following the receipt of a valid bag leak detection alarm, PEC will inspect the baghouse for air leaks, torn or broken bags, or any other condition that may cause an increase in emissions. (63.7300(c)(3)(i)

2.2.10.5 Torn, broken, or leaking bags will be isolated and repaired or replaced. (63.7300(c)(3)(ii) and (iii)

2.2.10.6 Corrective action to correct a bag leak detection issue will be initiated within 24 hours of the alarm and completed as soon as is practical. (63.7300(c)(3)

2.2.10.7 In the event of a module isolation or complete baghouse shutdown, operations will take the appropriate actions according to the applicable procedure for pushing without the entire PEC system.

3.0 Site-Specific Monitoring Plan

3.1 Scope

The following continuous parametric monitoring systems (CPMS) for changes in relative particulate matter loadings (63.7330(a) are covered by this plan:

- Bag Leak Detection System on 1-3 PEC Modules
- Bag Leak Detection System on 13-15 PEC Modules
- Bag Leak Detection System on 19/20 PEC Modules
- Bag Leak Detection System on B Battery PEC Modules
- Bag Leak Detection System on C Battery PEC Modules

The opacity of emissions from the following battery combustion stack will monitored continuously:

- Battery 1
- Battery 2
- Battery 3
- Battery 13
- Battery 14
- Battery 15
- Battery 19
- Battery 20
- B Battery
- C Battery

3.2 Control and Capture System Monitoring Requirements for Continuous Compliance (63.7330)

3.2.1 Schedule

Parameter	Frequency	Recording	Regulatory Citation
Module Pressure Drop (1-3, 13-15, 19/20, and C PEC Systems maintained between 2 and 10" w.c.) *	Continuous across push	CMS Records	63.7330(a)(1)
Minimum Fan Amps (1-3, 13-15, 19/20, and C PEC Systems)	Continuous across push	CMS Records	63.7330(d)
PEC Duct Suction Pressure (1-3, 13-15, 19/20, and C PEC Systems)	Continuous across push	CMS Records	
Module Pressure Drop (B Battery) *	Continuous across push	CMS Records	63.7330(a)(4)

Minimum Fan Amps (B Battery)	Continuous across push	CMS Records	63.7330(d)
PEC Flow (B Battery)	Continuous	CMS Records	63.7330(a)(4)
Confirm dust removal from hoppers	Weekly	ERP	63.7330(a)(2)
Compressed Air Pressure	Daily	Baghouse Daily Reading Form	63.7330(a)(3)
Visual check of bag cleaning mechanisms	Monthly	ERP	63.7330(a)(5)
Confirm physical integrity of baghouse	Quarterly	ERP	63.7330(a)(7)

* Used to indicate the proper operation of the cleaning cycles

3.2.2. Documentation that sample probes and other interfaces are installed and located such that measurements are representative will be maintained in Environmental Department files. (63.7331(b)(1).

3.2.3. Documentation for the performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system will be maintained in Environmental Department files. (63.7331(b)(2).

3.2.4. Documentation of the performance evaluation procedures and acceptance procedures such as calibrations will be maintained in Environmental Department files. (63.7331(b)(3)

3.2.5. Bag leak detection system will be operated and maintained according to good air pollution control practices. The necessary parts for routine repairs will be readily available. (40 CFR 63.8(c)(1))

3.2.6. The results of the performance test as well as the completed manufacturer's specifications or recommendations for installation, operation, and calibration of the bag leak detection system shall be kept in the Environmental Control Department Central Files. (40 CFR 63.8(c)(3))

3.2.7. The bag leak detection system will complete one cycle of operation (sampling, analyzing, and data recording) at least every 15 minutes. (40 CFR 63.8(c)(4)(ii))

3.2.8. If the bag leak detection system is out of control (i.e. has failed a manual calibration or performance test), appropriate corrective action will be performed. The applicable breakdown procedure will also be followed. (40 CFR 63.8(c)(7) and (8))

3.2.9. Ongoing data QA procedures consistent with 40 CFR 63.8(d)

3.2.10. Ongoing Recordkeeping and reporting procedures consistent with the general requirements of 40 CFR 63.10(c), (e)(1) and (e)(2)(i).

3.3 Combustion Stack Continuous Opacity Monitor

3.3.1 Continuous opacity monitors (COM) will monitor the opacity of emissions from all battery combustion stacks (63.7330(e))

3.3.2 Stack opacity daily average will be determined reducing 1-second opacity readings into 10-second average (at least 1 value is required for a valid 10-second average); the 10-second averages will be reduced into 6-minute averages (36 values are required for a valid 6-minute average); the 6-minute averages will be reduced to hourly averages; and all valid 6-minute averages will be reduced into a daily average.

3.3.3 The daily average opacity limit is 15% for a battery on normal coking time and 20% for a battery on battery-wide extended coking time. 63.7296 (a) and (b)

3.4 Fugitive Pushing Emissions

3.4.1 Monitoring of fugitive pushing emissions will be done per the MACT Pushing Work Practices Procedure.

3.5 Quench Tower Baffle Washing and Quench Water

3.5.1 The ambient temperature will be continuously recorded at least on days that the baffles are not washed in the Coke Management System. 63.7295(b)(2)(ii)

3.5.2 The quench system will track the number of quenches by the primary tower. This will be periodically compared to the total number of pushes in order to verify that the alternate tower has maintained "back-up station" status.

3.5.3 Quench water samples will be collected from the pump system which feeds water used for quenching under normal operating conditions. (63.7325(a)(1)

3.5.4 The TDS of the quench water will determined using Method 160.1 in 40 CFR part 136.3 except the sample must be dried to 103 to 105 ° C. (63.7325(a)(2)

3.5.5 TDS in the quench water will not exceed 1,100 mg/L (63.7326(c))

3.6 Initial Compliance Demonstration

3.6.1 The PEC systems will be tested between April 14 and September 14, 2006 (63.7320(a) and subsequently every 30 months (63.7321) per the following method:

3.6.1.1 For B Battery shed:

3.6.1.1.1 The concentration of particulate matter will be determined according to the test methods in appendix A to 40 CFR Part 60. (63.7295 (b)(1)) These will be detailed in a test protocol submitted to ACHD prior to the test date.

3.6.1.1.1.1 Method 1 to select sampling port locations and number of traverse points. Samples must be located at the outlet of the control device and prior to the release to the atmosphere;

3.6.1.1.1.2 Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas;

3.6.1.1.1.3 Method 3, 3A, or 3B to determine the dry gas molecular weight of the stack gas;

3.6.1.1.1.4 Method 4 to determine the moisture content of the stack gas;

3.6.1.1.1.5 Method 5 or 5D to determine the concentration of front half particulate matter in the stack gas.

3.6.1.1.2 During each test run, sample only during periods of actual pushing. Collect a minimum sample volume of 30 cu ft of gas during each sample run. Three valid test runs will be taken to comprise a performance test. An integral number of pushes must be sampled during each run. 63.7295 (b)(2)

3.6.1.2 For 1-3, 13-15, 19/20, and C PEC Systems

3.6.1.2.1 The concentration of particulate matter will be determined according to the test methods in appendix A to 40 CFR Part 60. (63.7295 (b)(1)) These will be detailed in a test protocol submitted to ACHD prior to the test date.

3.6.1.2.1.1 Method 1 to select sampling port locations and number of traverse points. Samples must be located at the outlet of the control device and prior to the release to the atmosphere;

3.6.1.2.1.2 Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas;

3.6.1.2.1.3 Method 3, 3A, or 3B to determine the dry gas molecular weight of the stack gas;

3.6.1.2.1.4 Method 4 to determine the moisture content of the stack gas;

3.6.1.2.1.5 Method 5 or 5D to determine the concentration of front half particulate matter in the stack gas.

3.6.1.2.2 During each test run, sample only during periods of actual pushing. Collect a minimum sample volume of 30 cu ft of gas during each sample run. Three valid test runs will be taken to comprise a performance test. An integral number of pushes must be sampled during each run. 63.7295 (b)(2)

3.6.1.2.3 The total combined weight of coke pushed in tons during the test will be calculated from coal charged or by using accounting values for coke and coke breeze produced. (63.7295 (b)(3))

3.6.1.2.4 The process-weighted mass emissions (E_p)for each test run using the following equation:

$$E_p = \frac{(\text{concentration PM, gr/dscf})(\text{Vol flow rate stack gas, dscf/hr})(\text{time, hr})}{(\text{coke pushed, tons})(7000 \text{ gr/lb})}$$

3.6.1.3 During the initial performance test the fan amperes will be measured and recorded during each push sampled to determine the minimum operating fan motor ampere. It will be the lowest measured during any of the three runs that meet the emission limit. (63.7323 (c)(1))

3.6.1.4 After the setting of the minimum fan motor ampere level, in order to change it, the following will be done:

3.6.1.5 The Environmental Department will submit a written notification to request a new performance test to revise the operating limit;

3.6.1.6 A new performance test will be conducted including the measurement of fan motor amperes and mass emission rates; and

3.6.1.7 The procedure described above for the initial performance demonstration will be followed.

3.6.2 Initial compliance with the stack opacity requirement will be demonstrated using the COM system and the data reduction procedure described above. (63.7324)

4.0 Startup, Shutdown and Malfunction Plan (63.7336(b)

4.1 Scope

The purpose of the plan is to ensure that, at all times, USS Clairton Works operates and maintains each affected source, including associated air pollution control equipment and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by 40 CFR 63.6(e)(1)(i). The measures to be taken to accomplish this are outlined in this plan.

The following process, particulate emission control, capture, and monitoring equipment used to comply with the standard are covered by this plan:

- Process Equipment
  - Battery 1
  - Battery 2
  - Battery 3
  - Battery 13
  - Battery 14
  - Battery 15
  - Battery 19
  - Battery 20
  - B Battery
  - C Battery
- Particulate emission control devices
  - 1-3 PEC Baghouse
  - 13-15 PEC Baghouse
  - 19/20 PEC Baghouse
  - B Battery Baghouse
  - C Battery Baghouse
- Particulate Emission Capture Devices
  - 1-3 PEC Hood, duct, fan, and dampers
  - 13-15 PEC Hood, duct, fan, and dampers
  - 19/20 PEC Hood, duct, fan, and dampers
  - B Battery Shed, fan, and dampers
  - C Battery Coke Transfer Car, duct, fan, and dampers
- Monitoring Equipment
  - Battery 1 Stack Opacity Monitoring System
  - Battery 2 Stack Opacity Monitoring System
  - Battery 3 Stack Opacity Monitoring System
  - Battery 13 Stack Opacity Monitoring System
  - Battery 14 Stack Opacity Monitoring System
  - Battery 15 Stack Opacity Monitoring System
  - Battery 19 Stack Opacity Monitoring System
  - Battery 20 Stack Opacity Monitoring System
  - B Battery Stack Opacity Monitoring System

- C Battery Stack Opacity Monitoring System
- 1-3 PEC Baghouse Fan Amp Measuring System
- 13-15 PEC Baghouse Fan Amp Measuring System
- 19/20 PEC Baghouse Fan Amp Measuring System
- B Battery Baghouse Fan Amp Measuring System
- C Battery Baghouse Fan Amp Measuring System
- 1-3 PEC Baghouse Bag Leak Detection System
- 13-15 PEC Baghouse Bag Leak Detection System
- 19/20 PEC Baghouse Bag Leak Detection System
- B Battery Baghouse Bag Leak Detection System
- C Battery Baghouse Bag Leak Detection System

4.2 **Plan Elements**

4.2.1 **Battery Start-up** – During the start-up of a battery or an individual oven or ovens following a period of idle hot operation or extended empty period for repair or initial start-up in the case of C Battery; the following situations may occur:

Emission Point	Issue	Action to be Taken
Stacks	Loss of sealing carbon (including from purging, outages, etc.)	Dusting and/or spray jambs and/or end flues, if necessary
	Open joints around charging holes, standpipe bases, and inspection holes	Patching, spraying, dry gunning, ceramic welding, and/or other repair technique, if necessary
	Fuel to air ratio change or imbalance	Adjust gas and/ or air as required
	Existing/ previously repaired holes and cracks open up in walls and around flues	Patching, spraying, dusting, and/ or flue maintenance, if necessary
Pushing	Low battery and/or flue temperatures	Monitor flue and coke temperatures and coke conditions
Quenching	None expected	Normal operation
Soaking	Soaking Emissions	See Soaking Work Practice

4.2.2 **Battery Shutdown -** During the shutdown of a battery or an individual oven or ovens in preparation for a period of idle hot or extended empty period for repair; the following situations may occur:

Emission Point	Issue	Action to be Taken
Stacks – battery to idle hot & empty ovens	None expected	Normal practices
Stacks – ovens next to empty ovens	Loss of sealing carbon due to extended coking time	Dusting and/or routine patching and spraying
Pushing	May experience temperature changes	Monitor adjacent ovens and develop best course of action for heating on a case by case basis
	Low battery and/ or temperatures	Monitor flue and coke temperatures and coke conditions
Quenching	None expected	Normal operation
Soaking	Soaking emissions	See Soaking Work Practice Plan

4.2.3 **Battery and/or Oven Malfunction** - The purpose of this section is to ensure that Clairton Works is prepared to correct malfunctions as soon as practical after their occurrence. The issues designated with **BOLD LETTERING** may cause additional challenges during the start-up of a battery and/ or oven. Additional measures may be required or the start-up may need to be postponed. During the malfunction of a battery and/or an oven following situations may occur:

Emission Point	Issue	Operation	Corrective Action
Stacks	**Loss of underfire COG system to 1 or more batteries**	Normal Operations (assumes NG availability)	Reduce Gas Flow, Increase Draft
	Loss of underfire pressure	Normal Operations	Center reversing machine, keep underfire main positive psi, reduce gas flow, reduce draft
	Loss of power	Stop operations until notified by Heating	Manually set Gas and Draft and control valves
	COM or COMS failure	Normal Operations	Facilitate Repairs
	Extended coking time battery-wide >22.5 hours	Push and Charge within scheduled times	Increased refractory maintenance

	Charge delay due to machine breakdown or coal flow problems	Curtail Pushing if more than 5 Empty ovens; charge up before resuming pushing	Repair machine and notify Heaters of delay and oven numbers; resume normal operation
	Foul gas control malfunction (including askania valve malfunction)	Stop charging until notified by Heating Representative	Manually adjust or pin
Stacks con.	Extended coking time oven	Monitor stack emissions and adjust operation and/or maintenance (increase refractory maintenance and/ or adjust decarb time)	Bring back into series
	Air box malfunction	Normal operations	Facilitate repairs
	Confirmed hole in wall/ oven wall failure	Do Not Charge Oven and report oven to Heaters	Place oven out of service until further notice. Implement repairs
	Hole in wall/ oven wall failure undetected prior to charge or developed during or after the charge	Notify heaters and/ or operators	Identify oven using charging times or inspecting flue chamber; stabilize the air to fuel ratio by increasing draft, cutting underfire gas, or other means.
	By-products Plant breakdown	Notify operators and heaters	Facilitate repairs; make underfire adjustments as necessary
	Reversing mechanism failure/ malfunction	Normal Operations/Manual Reverses	Facilitate repairs
	Air to fuel ratio malfunction	Normal Operations	Adjust gas and/ or air; repair malfunction
	Flue or regenerator problem including dropped nozzle	Normal operation	Facilitate repairs
	Training system failure	Normal operation	Take corrective action as necessary; retrain
	Other cracks & leaks (jambs, etc.)	Notify Heating for inspection	Schedule & perform repair as required
Pushing – excessive emissions	PEC/ shed breakdown/ outage including baghouse, hood, and related equipment	Controlled Pushing	Monitor Coke Conditions and take Heat Delays as Necessary

	PEC/ shed system at reduced efficiency	Controlled Pushing	Monitor Coke Condition. Take Heat Delays as necessary. Facilitate repairs
	Loss of underfire pressure or underfire COG system	Normal operation	Adjust heating if necessary
	Cool coke because adjacent to extended coking time oven or out-of-service oven	Normal Operations	Adjust walls
	Reversing system problem	Normal Operations	Repair malfunction
	Flushing liquor leak into oven	Normal Operations	Place oven on extended coking time. Repair problem
	Steam left in oven	Reduce operations as necessary	Notify Heaters. Heaters to evaluate oven for possible extended coking time. Remove steam from oven.
	Coal quality issues (moisture, BD, etc.)	Heat delay, adjust heating, and/ or adjust operations as necessary	Monitor Flue and coke temperatures; adjust heat and/ or modify coal blend, if applicable
	Flue problem	Normal Operations	Repair Flues
	Door plug failure	Normal operations	Replace door
	Irreparable flue	Evaluate for possible extended coking time	Replace flue
	Below minimum coking time	Stop Operations until get to minimum	None
	Fuel to air ration change or imbalance	Normal operations	Adjust gas and/ or air as required
	Training system failure	Normal operations	Take corrective action as necessary; retrain
	Low battery and/ or oven/ coke temperatures	Reduce Operations, as necessary	Check heat input & adjust, if necessary. Monitor flue and coke temperatures and coke conditions. Take Heat Delays or bank oven as necessary.

Pushing – work practice deviation	Communication system malfunction (including database, scheduling, and notification systems, etc.)	Use telephone, radio, etc	Repair system
	Failed to read 4 consecutive pushes due to battery outage and/ or unexpected delay or battery shutdown	Document outage, delay, or shutdown	None
	Recording system failure	Use paper, telephone, radio, etc.	Repair system
	Verification failed due to second, independent root cause	Investigate relation to first root cause	Correct second, independent root cause
	Failure to perform 90-day observation due to oven out of service or in a work zone	Observe next day light opportunity	None
	Training system failure	Employ back-up systems and personnel	Retrain and take corrective action as appropriate
Quenching	Spray wash system failure including pump, PLC, nozzle, and piping	Manually wash, if practical and safe	Repair system
	Damaged or plugged baffle(s)	Normal operation	Repair or unplug as required
	System fails to record ambient temperature below 30 F	Record temperature at nearby location as available	Repair system
	Tower PLC fails to initiate wash and fails to record ambient temperature	Record nearest calibrated ambient temperature	Calibrate and repair
	Invalid analysis or contaminated sample	Re-sample and/ or re-analyze	Review procedures and revise and/ or retrain as necessary
	Lost sample	Re-sample	Review procedures and revise and/ or retrain as necessary
	Erroneous source enters the quench sump causing high TDS	Normal operation	Remove source

	Training system failure	Normal operation	Retrain and take corrective action as appropriate
	River water makeup TDS is high	Normal operation	Investigate other options
Soaking	Training system failure	Document	Retrain and take corrective action as appropriate
	Nozzle failure	Inject minimal amount of aspirating steam & report	Repair nozzle
	Damper dish fails	Inject minimal amount of aspirating steam & report	Repair damper dish
	PROven system fails	*Inject minimal amount of aspirating steam & report*	Repair system

4.2.4 During start-ups, shutdowns, and malfunctions, efforts will be made to eliminate or minimize emissions; however, emissions will not be diverted in order to by-pass a monitoring device such as the stack continuous opacity monitor or bag leak detection system or a capture and control device such as the PEC systems. When a malfunction of the PEC system occurs, the proper procedures will be followed.

5.0 Plan Maintenance, Recordkeeping and Reporting

5.1 Initial plan requirements

- The Operation and Maintenance Plan, Site-Specific Monitoring Plan, Startup, Shutdown and Malfunction Plan and the Site-Specific Soaking Work Practice Plan must be developed and implemented by April 14, 2006
- The plans are not required to be submitted to or approved by U.S. EPA or ACHD unless there is a requirement to do so in Clairton Works final Title V operating permit.
- Failure to meet any condition in a plan is a deviation and must be reported as such in Clairton Works periodic deviation report.

5.2 Plan revisions

- Plans may be revised at any time provided ACHD is notified of the revision in the next periodic Title V compliance certification.

5.3 Recordkeeping

- Clairton Works must keep all current plans, superceded plans and all information necessary to demonstrate that compliance with each plan requirement on-site for a period of at least 5 years.
- The following records will be kept for 5 years:
    - When and how long each malfunction of MACT operations, or air pollution control and monitoring equipment happened;
    - What corrective action was done to correct/ repair the malfunctioning equipment;
    - Whether the current SS&M Plan was followed;
    - What was done differently than outlined in the current SS&M Plan; and

5.4 Special Startup, Shutdown and Malfunction reporting requirement

- If, at any time, Clairton Works fails to follow your Startup, Shutdown and Malfunction Plan during a startup, shutdown or malfunction event Clairton Works must report that failure by telephone, FAX or E-Mail within 2 days following the failure.
- Clairton Works must also send a letter within 7 days following the end of the startup, shutdown or malfunction event, including the following information:
    - Your name and title
    - Certifying signature of the plant Responsible Official
    - How the startup, shutdown or malfunction event happened
    - What you did in response to the event
    - Reasons you did not follow your plan

- Whether any regulated HAP emissions or monitored parameters were higher or different from their allowable values during the startup, shutdown or malfunction event.

- Within 45 day of the end of the event, Clairton Works must revise the plan to describe what we will do if the event happens again.